

IN THE CLAIMS

1. (Currently Amended) An acoustic transducer assembly comprising:
a substrate having a topside and a backside;
a microfabricated acoustic transducer formed on the topside of the substrate; and
a damping material disposed on the backside of the substrate, the damping material
having an acoustic impedance substantially equal to that of the substrate and
suppressing substrate acoustic modes.
2. (Currently Amended) An apparatus according to claim 1 wherein:
the damping material is lossy; and has an
the acoustic impedance of the damping material that is similar to the acoustic impedance
of the substrate that of silicon and is lossy.
3. (Original) An apparatus according to claim 1 further including electronic circuits formed
in the substrate.
4. (Currently Amended) An apparatus according to claim 3 wherein the electronics
circuits are in between the ~~sensor~~ transducer and the damping material.
5. (Original) An apparatus according to claim 1 wherein the substrate is a wafer.
6. (Original) An apparatus according to claim 1 wherein the damping material suppresses a
longitudinal ringing mode.
7. (Original) An apparatus according to claim 1 wherein the damping material suppresses a
lamb wave ringing mode.
8. (Original) An apparatus according to claim 1 wherein the microfabricated acoustic
transducer operates at frequencies above 20 kHz.

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19. (Currently Amended) A method for suppressing acoustic modes, the method comprising:
- providing a substrate having a topside and a backside;
 - forming a microfabricated acoustic transducer on the topside of the substrate; and
 - placing a damping material on the backside of the substrate, the damping material having an acoustic impedance substantially equal to that of the substrate and suppressing substrate acoustic modes.
20. (Currently Amended) The method of claim 19 wherein:
- the damping material is lossy; and has an
 - the acoustic impedance of the damping material ~~that is similar to the acoustic impedance of the substrate that of silicon and is lossy.~~
21. (Original) The method of claim 20 further comprising forming electronic circuits in the substrate.
22. (Currently Amended) The method of claim 21 wherein the electronics circuits are in between the ~~sensor~~ transducer and the damping material.
23. (Original) The method of claim 19 wherein the substrate is a wafer.
24. (Original) The method of claim 19 wherein the damping material suppresses a longitudinal ringing mode.
25. (Original) The method of claim 19 wherein the damping material suppresses a lamb wave ringing mode.
26. (Original) The method of claim 19 further comprising operating the microfabricated acoustic transducer at frequencies above 20 kHz.